

**Flood Control Project Maintenance
Levee Inspections**

Fall 2018 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

NA0008	Overall LMA Rating	Total LMA Miles						
Knights Landing Ridge Drainage District	A	12.39						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Encroachments					1.16			
Erosion / Bank Caving	0.03		0.03	0.24%				
Cracking	0.01		0.01	0.08%				
<i>Supplemental</i>								
2017 USACE Erosion Survey, DRAFT	0.28		0.28	2.26%				
DWR UCIP Field Study					0.10			
DWR UCIP LMA Responsibility								
<i>LMA Totals:</i>	0.32	0.00	0.32	2.58%	1.26	0.00	0.00	0.00
Unit No. 01 Knights Landing Ridge Cut RB	Overall Unit Rating	Total Unit Miles						
NA0008	A	6.36						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Encroachments					0.95			
Erosion / Bank Caving	0.03		0.03	0.47%				
Cracking	0.01		0.01	0.16%				
<i>Supplemental</i>								
2017 USACE Erosion Survey, DRAFT	0.15		0.15	2.36%				
DWR UCIP Field Study					0.06			
DWR UCIP LMA Responsibility								
<i>Unit Totals:</i>	0.19	0.00	0.19	2.99%	1.01	0.00	0.00	0.00
Unit No. 02 Knights Landing Ridge Cut LB	Overall Unit Rating	Total Unit Miles						
NA0008	A	6.03						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Earthen Levee</i>								
Encroachments					0.21			
<i>Supplemental</i>								
2017 USACE Erosion Survey, DRAFT	0.13		0.13	2.16%				
DWR UCIP Field Study					0.04			
<i>Unit Totals:</i>	0.13	0.00	0.13	2.16%	0.25	0.00	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections****LMA District Cover Sheet
Fall 2018 Levee Inspection Results****Knights Landing Ridge Drainage District**

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
† Overall LMA Rating (Fall Only)			A	

** Non-receipt of Summer or Winter Inspection
Reports may effect overall annual rating.

†

SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2018 Levee Inspection Results

Knights Landing Ridge Drainage District

Waterway			Bank	Unit Miles
Unit No. 01 Knights Landing Ridge Cut			Right	6.36
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	3/13/2018 - 3/13/2018		10/12/2018 - 10/12/2018	
DWR Inspector	Zach Jojola		Zach Jojola	
Accompanied By	Gary Marler RD0108		Gary Marler RD0108	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start		Rating **	A	Issue No.	3
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Operations & Maintenance Manuals			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2017_3				
Comment Code					
Inspector Comment					
District has levee O&M manuals.					

No Photos

LM Start		Rating **	A	Issue No.	8
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Emergency Supplies & Equipment			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2013_8				
Comment Code					
Inspector Comment					
District maintains a stockpile of flood fight response material.					

No Photos

LM Start		Rating **	A	Issue No.	9
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Flood Preparedness & Training			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2013_9				
Comment Code					
Inspector Comment					
District has written response plan and regular flood fight training.					

No Photos

*** Location**
 LS : Land Side N/A : Not Applicable
 WS : Water Side
 CR : Crown

**** Rating**
 A : Acceptable N : Not Inspected/Rated
 M : Minimally Acceptable C : Corrected
 U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type
 Ma : Maintenance Deficiency
 Ob : Design & System Obsolescence
 En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	0.25	Rating **	A/W	Issue No.	32
LM End	0.25	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.722222°	38.722222°
				-121.666357°	-121.666357°
DWR ID	19360				
Comment Code					
Inspector Comment					
FS_ID:48010 DS_ID:19360 EP_NO: 9302 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: Pipe has been grouted in place under permit 18987, 2015Pipe completely rusted through on LS slope of levee at toe/headwall of concrete distribution box. Pipe needs replacement or proper abandonment. Pipe not visible at outlet. FIELD_STRUCT_DESC: *ABANDONED* 36-inch corrugated metal drainage pipe through the levee, 27 feet below the crown. Slide gate on the waterside (WS) end. 12-foot by 6-foot concrete box on the landside (LS) end. (36-inch pipe [HLM 1.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9302, 1974 - Barbara Lowe Elliott; 36-inch pipe abandoned by removing ends and pumping pipe full of concrete under Permit No. 18987, 2016 - Knaggs Ranch, LLC, care of John Brennan). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 0+30)]. FS Date: 5/16/2016 3:59:29 PM					

Photo 1 of 3 : UCIP_FA_2018_48010_21582.jpg



Concrete distribution box on LS toe.

LM Start	0.25	Rating **	A/W	Issue No.	32 (cont)
LM End	0.25	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP_FA_2018_48010_21581.jpg



Slide gate on metal stand on WS toe. Pipe opening not visible.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	0.25	Rating **	A/W	Issue No.	32 (cont)	
LM End	0.25	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.722222°	38.722222°	
				-121.666357°	-121.666357°	
DWR ID	19360					
Comment Code						
Inspector Comment						
FS_ID:48010						
DS_ID:19360						
EP_NO: 9302						
Repair Type: No Action Needed						
Crossing Status: Found						
UCIP Comments: Pipe has been grouted in place under permit 18987, 2015Pipe completely rusted through on LS slope of levee at toe/headwall of concrete distribution box. Pipe needs replacement or proper abandonment. Pipe not visible at outlet.						
FIELD_STRUCT_DESC: *ABANDONED* 36-inch corrugated metal drainage pipe through the levee, 27 feet below the crown. Slide gate on the waterside (WS) end. 12-foot by 6-foot concrete box on the landside (LS) end. (36-inch pipe [HLM 1.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9302, 1974 - Barbara Lowe Elliott; 36-inch pipe abandoned by removing ends and pumping pipe full of concrete under Permit No. 18987, 2016 - Knaggs Ranch, LLC, care of John Brennan). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 0+30)].						
FS Date: 5/16/2016 3:59:29 PM						

Photo 3 of 3 : UCIP_FA_2018_48010_21580.jpg



Pipe failure at connection to concrete box on LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	0.87	Rating **	M	Issue No.	33	
LM End	0.87	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			38.727869 °		38.727869 °
				-121.674875 °		-121.674875 °
DWR ID	19361					
Comment Code						
Inspector Comment						
FS_ID:11064						
DS_ID:19361						
EP_NO: 9302						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: Pipe exposed on WS slope in trench may need to be backfilled to prevent erosion under pipe.						
FIELD_STRUCT_DESC: 20-inch steel irrigation pipe through the levee, 8.8 feet below the crown. Pump on a steel pile structure at the waterside (WS) toe. Siphon breaker in a 12-inch steel riser on the landside (LS) slope. Possible butterfly valve at the LS toe. (Permit No. 9302, 1974 - Barbara Lowe Elliott). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 32+94)].						
FS Date: 4/5/2013						

LM Start	0.87	Rating **	M	Issue No.	33 (cont)
LM End	0.87	Issue Type +	En	Location *	

Photo 1 of 3 : UCIP_FA_2018_11064_18426.jpg



Pump on pile at WS toe with pipe in open trench on LS slope.

Photo 2 of 3 : UCIP_FA_2018_11064_18425.jpg



Siphon breaker in 12-inch steel riser on LS slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	1.15	Rating **	M	Issue No.	34
LM End	1.15	Issue Type +	En	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP Field Study		38.730275°	38.730275°	
			-121.678975°	-121.678975°	
DWR ID	19362				

Comment Code

Inspector Comment

FS_ID:11065
DS_ID:19362
EP_NO: 9305
Repair Type: Non-Urgent
Crossing Status: Found
UCIP Comments: Slope on WS shoulder appears to be eroding at pipes exit from levee. 36-inch conc riser on LS is filled with mud.
FIELD_STRUCT_DESC: 10-inch steel irrigation pipe through the levee, 5.8 feet below the crown. Pump at the waterside (WS) toe. 36-inch concrete standpipe at the landside (LS) toe. (Permit No. 9305, 1974 - Albert L. Bacchini). 5-inch steel pipe sleeved through the 10-inch pipe. Annular space grouted. (Permit No. 6076, 1968 - Albert L. Bacchini).
[Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 47+00) (11-inch pipe listed)].
FS Date: 4/5/2013

LM Start	1.15	Rating **	M	Issue No.	34 (cont)
LM End	1.15	Issue Type +	En	Location *	

Photo 1 of 3 : UCIP_FA_2018_11065_18429.jpg



Pump on WS shoulder overgrown and may be abandoned.

Photo 2 of 3 : UCIP_FA_2018_11065_18428.jpg



Erosion at pipes exit from levee on WS shoulder.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	--	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	1.15	Rating **	M	Issue No.	34 (cont)	
LM End	1.15	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.730275 °	38.730275 °	
				-121.678975 °	-121.678975 °	
DWR ID	19362					
Comment Code						
Inspector Comment						
FS_ID:11065						
DS_ID:19362						
EP_NO: 9305						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: Slope on WS shoulder appears to be eroding at pipes exit from levee. 36-inch conc riser on LS is filled with mud.						
FIELD_STRUCT_DESC: 10-inch steel irrigation pipe through the levee, 5.8 feet below the crown. Pump at the waterside (WS) toe. 36-inch concrete standpipe at the landside (LS) toe. (Permit No. 9305, 1974 - Albert L. Bacchini). 5-inch steel pipe sleeved through the 10-inch pipe. Annular space grouted. (Permit No. 6076, 1968 - Albert L. Bacchini). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 47+00) (11-inch pipe listed)].						
FS Date: 4/5/2013						

Photo 3 of 3 : UCIP_FA_2018_11065_18427.jpg



36-inch Concrete standpipe at LS toe

LM Start	1.59	Rating **	M	Issue No.	35
LM End	1.59	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.735399 °	38.735399 °
				-121.684058 °	-121.684058 °
DWR ID	19363				
Comment Code					
Inspector Comment					
FS_ID:13204					
DS_ID:19363					
EP_NO: 9302					
Repair Type: Non-Urgent					
Crossing Status: Found					
UCIP Comments: Space between 16-inch and 24-inch pipe should be grouted. There is no pump on stand at WS toe.					
FIELD_STRUCT_DESC: 24-inch steel irrigation pipe through the levee, 5.9 feet below the crown. 16-inch steel pipe sleeved through this pipe.					
No visible control valves. Pump on a pile structure in the stream.					
Siphon breaker on the landside (LS) slope. Pipe discharges into a concrete irrigation ditch off the LS toe. (Permit No. 939, 1943 - W. K. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 71+25)].					
FS Date: 4/5/2013					

Photo 1 of 3 : UCIP_FA_2018_13204_21588.jpg



16-inch pipe sleeved through 24-inch pipe on WS slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	1.59	Rating **	M	Issue No.	35 (cont)	
LM End	1.59	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			38.735399 °		38.735399 °
				-121.684058 °		-121.684058 °
DWR ID	19363					
Comment Code						
Inspector Comment						
FS_ID:13204						
DS_ID:19363						
EP_NO: 9302						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: Space between 16-inch and 24-inch pipe should be grouted. There is no pump on stand at WS toe.						
FIELD_STRUCT_DESC: 24-inch steel irrigation pipe through the levee, 5.9 feet below the crown. 16-inch steel pipe sleeved through this pipe.						
No visible control valves. Pump on a pile structure in the stream.						
Siphon breaker on the landside (LS) slope. Pipe discharges into a concrete irrigation ditch off the LS toe. (Permit No. 939, 1943 - W. K. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 71+25)].						
FS Date: 4/5/2013						

Photo 2 of 3 : UCIP_FA_2018_13204_21590.jpg



Siphon breaker on LS slope.

LM Start	1.59	Rating **	M	Issue No.	35 (cont)
LM End	1.59	Issue Type +	En	Location *	

Photo 3 of 3 : UCIP_FA_2018_13204_21589.jpg



Pipe and pier on WS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.23	Rating **	M	Issue No.	23
LM End	2.23	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.742899 °	38.742899 °
				-121.690897 °	-121.690897 °
DWR ID	DWR_NA0008_01_f_2018_23				
Comment Code					
CR1 : Monitor and have inspected by geotechnical engineer.					
Inspector Comment					
50' crack on the crown at previous sloughing site. There appears to be no bulge or sloughing on the landside slope. Slight settlement on the crown. Recommend monitoring.					

Photo 1 of 1 : FA_2018_NA0008_256_23_20181012_00044.jpg



View of crack and settlement on the crown. Fall 2018.

LM Start	2.58	Rating **	M	Issue No.	36	
LM End	2.58	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.747110 °	38.747110 °	
				-121.694415 °	-121.694415 °	
DWR ID	19364					
Comment Code						
Inspector Comment						
FS_ID:11067 DS_ID:19364 EP_NO: 9307 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Siphon breaker on LS burried or broken off and missing. FIELD_STRUCT_DESC: 1 of 2: 14-inch steel drainage pipe through the levee, 5.4 feet below the crown. Pump house on a pile structure at the landside (LS) toe. Siphon breaker on the LS slope. Service pole and anchor at the LS toe. (14-inch pipe [HLM 2.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9307, 1974 - Azalene E. Lowe; a 12-foot section of an existing 14-inch pipe on LS replaced and name change under Permit No. 9307-1, 2016 - Ann Grube). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 123+25)]. FS Date: 4/5/2013						

Photo 1 of 1 : UCIP_FA_2018_11067_18431.jpg



Pump and pipe on LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.58	Rating **	M	Issue No.	37	
LM End	2.58	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.747204 °	38.747204 °	
				-121.694440 °	-121.694440 °	
DWR ID	19391					
Comment Code						
Inspector Comment						
FS_ID:13205						
DS_ID:19391						
EP_NO: 9307						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: Walkway to actuator slide gate is missing. No method of actuating slide gate.						
FIELD_STRUCT_DESC: 2 of 2: 48-inch by 48-inch reinforced concrete box drainage culvert through the levee, 23 feet below the crown.						
Walkway to slide gate on the waterside (WS) end. Concrete headwalls on both ends. Service pole and anchor at the landside (LS) toe.						
Concrete headwalls on both ends. (four foot by four foot culvert [HLM 2.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9307, 1974 - Azalene E. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 123+55.5)].						
FS Date: 4/5/2013						

Photo 1 of 3 : UCIP_FA_2018_13205_21602.jpg



Slide gate and concrete headwall on WS toe.

LM Start	2.58	Rating **	M	Issue No.	37 (cont)
LM End	2.58	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP_FA_2018_13205_21601.jpg



Concrete inlet on LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.58	Rating **	M	Issue No.	37 (cont)	
LM End	2.58	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.747204 °	38.747204 °	
				-121.694440 °	-121.694440 °	
DWR ID	19391					
Comment Code						
Inspector Comment						
FS_ID:13205 DS_ID:19391 EP_NO: 9307 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Walkway to actuator slide gate is missing. No method of actuating slide gate. FIELD_STRUCT_DESC: 2 of 2: 48-inch by 48-inch reinforced concrete box drainage culvert through the levee, 23 feet below the crown. Walkway to slide gate on the waterside (WS) end. Concrete headwalls on both ends. Service pole and anchor at the landside (LS) toe. Concrete headwalls on both ends. (four foot by four foot culvert [HLM 2.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9307, 1974 - Azalene E. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 123+55.5)]. FS Date: 4/5/2013						

Photo 3 of 3 : UCIP_FA_2018_13205_21605.jpg



Inlet located next to concrete headwall on LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.67	Rating **	A/W	Issue No.	38
LM End	2.67	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.748391 °	38.748391 °
				-121.694814 °	-121.694814 °
DWR ID	19365				
Comment Code					
Inspector Comment					
FS_ID:16105 DS_ID:19365 EP_NO: 9301 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 1 of 2: 18-inch steel drainage pipe through the levee, 6.4 feet below the crown. Siphon breaker on the waterside (WS) slope. Pump house mounted on concrete box in irrigation ditch at the landside (LS) toe. (one 18-inch and one 24-inch pipes [HLM 2.7] authorized under Automatic Board Order (ABO) issued as Permit No. 9301, 1974 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 128+00)]. FS Date: 4/5/2013					

Photo 1 of 3 : UCIP_FA_2018_16105_27207.jpg



Pipe on WS slope.

LM Start	2.67	Rating **	A/W	Issue No.	38 (cont)
LM End	2.67	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP_FA_2018_16105_27209.jpg



Pumphouse and pipe on LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.67	Rating **	A/W	Issue No.	38 (cont)	
LM End	2.67	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP LMA Responsibility			38.748391 °		38.748391 °
				-121.694814 °		-121.694814 °
DWR ID	19365					
Comment Code						
Inspector Comment						
FS_ID:16105						
DS_ID:19365						
EP_NO: 9301						
Repair Type: No Action Needed						
Crossing Status: Found						
UCIP Comments:						
FIELD_STRUCT_DESC: 1 of 2: 18-inch steel drainage pipe through the levee, 6.4 feet below the crown. Siphon breaker on the waterside (WS) slope. Pump house mounted on concrete box in irrigation ditch at the landside (LS) toe. (one 18-inch and one 24-inch pipes [HLM 2.7] authorized under Automatic Board Order (ABO) issued as Permit No. 9301, 1974 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 128+00)].						
FS Date: 4/5/2013						

Photo 3 of 3 : UCIP_FA_2018_16105_27210.jpg



Siphon breaker on WS slope.

LM Start	2.67	Rating **	A/W	Issue No.	39
LM End	2.67	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.748404 °	38.748404 °
				-121.694818 °	-121.694818 °
DWR ID	19392				
Comment Code					
Inspector Comment					
FS_ID:16106 DS_ID:19392 EP_NO: 9301 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel drainage pipe through the levee, 7.3 feet below the crown. Pump house mounted on concrete box in irrigation ditch at the landside (LS) toe. Siphon breaker in riser on the waterside (WS) slope. (one 24-inch and one 18-inch pipes [HLM 2.7] authorized under Automatic Board Order (ABO) issued as Permit No. 9301, 1974 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 128+00)]. FS Date: 4/5/2013					

Photo 1 of 3 : UCIP_FA_2018_16106_27213.jpg



Pumphouse and pipe on LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.67	Rating **	A/W	Issue No.	39 (cont)	
LM End	2.67	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP LMA Responsibility			38.748404 °	38.748404 °	
				-121.694818 °	-121.694818 °	
DWR ID	19392					
Comment Code						
Inspector Comment						
FS_ID:16106 DS_ID:19392 EP_NO: 9301 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel drainage pipe through the levee, 7.3 feet below the crown. Pump house mounted on concrete box in irrigation ditch at the landside (LS) toe. Siphon breaker in riser on the waterside (WS) slope. (one 24-inch and one 18-inch pipes [HLM 2.7] authorized under Automatic Board Order (ABO) issued as Permit No. 9301, 1974 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 128+00)]. FS Date: 4/5/2013						

Photo 2 of 3 : UCIP_FA_2018_16106_27212.jpg



Siphon breaker on WS slope

LM Start	2.67	Rating **	A/W	Issue No.	39 (cont)
LM End	2.67	Issue Type +	Ma	Location *	

Photo 3 of 3 : UCIP_FA_2018_16106_27214.jpg



Pipe on WS slope.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.68	Rating **	M	Issue No.	40	
LM End	2.68	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.748524 °	38.748524 °	
				-121.694788 °	-121.694788 °	
DWR ID	19383					
Comment Code						
Inspector Comment						
FS_ID:41892						
DS_ID:19383						
EP_NO: 13164						
Repair Type: Non-Urgent						
Crossing Status: Not Found						
UCIP Comments: Need to contact owner to determine status of crossing and install markers if appropriate.						
FIELD_STRUCT_DESC: 4-inch coated steel natural gas collection pipe through the levee, 2.8 feet below the crown. Pipe attached to the downstream side of the bridge. (Permit No. 13164, 1981 - Shell Oil Company). Design drawings available in permit.						
FS Date: 4/5/2013						

No Photos

LM Start	2.70	Rating **	M	Issue No.	18
LM End	2.70	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.748837 °	38.748837 °
				-121.694823 °	-121.694823 °
DWR ID	DWR_NA0008_01_f_2015_18				
Comment Code					
DE : Debris					
Inspector Comment					
Portion of the pipe seems to be replaced and the abandoned pipe is left at the toe of the landward side of the levee.					

Photo 1 of 2 : FA_2018_NA0008_256_18_20180904_00003.jpg



View of the abandoned pipe at the toe of levee on the landward side.
Fall 2015.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

Knights Landing Ridge Drainage District

View of the erosion at the toe of the levee on the waterward side. Spring 2016.

Page 17 of 22

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	3.86	Rating **	M	Issue No.	31
LM End	3.86	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.763751°	38.763751°
				-121.701398°	-121.701398°
DWR ID	DWR_NA0008_01_s_2018_31				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
Erosion at the toe of the levee. LMA is monitoring erosion with stakes.					

Photo 1 of 1 : FA_2018_NA0008_256_31_20180904_00011.jpg



View of the erosion at the toe of the levee on the waterward side. Spring 2016.

LM Start	3.88	Rating **	M	Issue No.	21
LM End	3.95	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.764037 °	38.764905 °
				-121.701434 °	-121.702074 °
DWR ID	DWR_NA0008_01_f_2018_21				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.9 R					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2011 - Toe erosion and erosion pockets from tree					
popouts. More tree popouts are expected due to the eroding toe.					

No Photos

LM Start	4.38	Rating **	M	Issue No.	22
LM End	4.88	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.771003°	38.777404°
				-121.703413°	-121.707412°
DWR ID	DWR_NA0008_01_f_2015_22				
Comment Code					
DT : Ditch					
Inspector Comment					
Ditch is at the levee toe on the landward side.					

Photo 1 of 1 : FA_2018_NA0008_256_22_20180904_00008.jpg



View of the ditch on the landward side of the levee looking upstream. Fall 2015.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
---	--	--	--	--	--

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	4.89	Rating **	M	Issue No.	41
LM End	4.89	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.777566 °	38.777566 °
				-121.707591 °	-121.707591 °
DWR ID	19367				
Comment Code					
Inspector Comment					
FS_ID:11264 DS_ID:19367 EP_NO: 4443 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe does not have adequate cover at crown. FIELD_STRUCT_DESC: 16-inch steel drainage pipe through the levee, 0.5 feet below the crown. Pad constructed over pipe for vehicular crossing. Pump on metal structure on the landside (LS). Flap gate on the waterside (WS) end. Siphon breaker on the pipe on the WS. Slide gate on the LS toe. (Permit No. 4443, 1963 - Reclamation District No. 730). Design drawings available in permit. [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/5/2013					

Photo 1 of 3 : UCIP_FA_2018_11264_18622.jpg



Pump and pipe on LS toe.

LM Start	4.89	Rating **	M	Issue No.	41 (cont)
LM End	4.89	Issue Type +	En	Location *	

Photo 2 of 3 : UCIP_FA_2018_11264_18621.jpg



Siphon and air vent on WS shoulder.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	4.89	Rating **	M	Issue No.	41 (cont)	
LM End	4.89	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.777566 °	38.777566 °	
				-121.707591 °	-121.707591 °	
DWR ID	19367					
Comment Code						
Inspector Comment						
FS_ID:11264 DS_ID:19367 EP_NO: 4443 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe does not have adequate cover at crown. FIELD_STRUCT_DESC: 16-inch steel drainage pipe through the levee, 0.5 feet below the crown. Pad constructed over pipe for vehicular crossing. Pump on metal structure on the landside (LS). Flap gate on the waterside (WS) end. Siphon breaker on the pipe on the WS. Slide gate on the LS toe. (Permit No. 4443, 1963 - Reclamation District No. 730). Design drawings available in permit. [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/5/2013						

Photo 3 of 3 : UCIP_FA_2018_11264_18620.jpg



Pump on Steel pile structure with slide gate at LS toe.

LM Start	6.00	Rating **	M	Issue No.	42	
LM End	6.00	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			38.788921 °		38.788921 °
				-121.721985 °		-121.721985 °
DWR ID	19397					
Comment Code						
Inspector Comment						
FS_ID:41068 DS_ID:19397 EP_NO: 5276 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe appears abandoned at this time. FIELD_STRUCT_DESC: 2 of 2: 20-inch steel irrigation pipe through the levee, 4.9 feet below the crown. Vertical pump unit on pile structure in stream. Siphon breaker on the landside (LS) shoulder in a 16-inch steel riser. Flap gate on the LS end. Pipe discharges into an irrigation ditch on the LS. Steel plate welded over end of pipe at pump structure. (Replaced an existing 18-inch pipe at this location under Permit No. 5276, 1966 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/5/2013						

Photo 1 of 3 : UCIP_FA_2018_41068_18643.jpg



Pump on steel structure at WS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	6.00	Rating **	M	Issue No.	42 (cont)	
LM End	6.00	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			38.788921 °	38.788921 °	
				-121.721985 °	-121.721985 °	
DWR ID	19397					
Comment Code						
Inspector Comment						
FS_ID:41068 DS_ID:19397 EP_NO: 5276 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe appears abandoned at this time. FIELD_STRUCT_DESC: 2 of 2: 20-inch steel irrigation pipe through the levee, 4.9 feet below the crown. Vertical pump unit on pile structure in stream. Siphon breaker on the landside (LS) shoulder in a 16-inch steel riser. Flap gate on the LS end. Pipe discharges into an irrigation ditch on the LS. Steel plate welded over end of pipe at pump structure. (Replaced an existing 18-inch pipe at this location under Permit No. 5276, 1966 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/5/2013						

LM Start	6.00	Rating **	M	Issue No.	42 (cont)
LM End	6.00	Issue Type +	En	Location *	

Photo 2 of 3 : UCIP_FA_2018_41068_18642.jpg



Steel plate welded over pipe end at pump platform.

Photo 3 of 3 : UCIP_FA_2018_41068_18641.jpg



Siphon breaker buried inside 16-inch steel riser on LS shoulder.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/12/2018 10/12/2018	Zach Jojola

LM Start	6.06	Rating **	M	Issue No.	7
LM End	6.34	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.789529°	38.792433°
				-121.722814°	-121.726463°
DWR ID	DWR_NA0008_01_f_2018_7				
Comment Code					
EQ : Equipment					
Inspector Comment					
Equipment and fence are on the landside slope of the levee.					

Photo 1 of 2 : FA_2018_NA0008_256_7_20180904_00001.jpg



View of the equipment on the landward side of the levee looking upstream. Fall 2015.

LM Start	6.06	Rating **	M	Issue No.	7 (cont)
LM End	6.34	Issue Type +	En	Location *	LS

Photo 2 of 2 : FA_2018_NA0008_256_7_20180904_00002.jpg



A current view of the equipment on the levee slope. Spring 2014

*** Location**
LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**
A : Acceptable N : Not Inspected/Rated
M : Minimally Acceptable C : Corrected
U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type
Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2018 Levee Inspection Results

Knights Landing Ridge Drainage District

Waterway			Bank	Unit Miles
Unit No. 02 Knights Landing Ridge Cut			Left	6.03
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	3/13/2018 - 3/13/2018		10/12/2018 - 10/12/2018	
DWR Inspector	Zach Jojola		Zach Jojola	
Accompanied By	Gary Marler RD0108		Gary Marler RD0108	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

Knights Landing Ridge Drainage District

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	0.99	Rating **	M	Issue No.	23 (cont)	
LM End	0.99	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.733120 °	38.733120 °	
				-121.679383 °	-121.679383 °	
DWR ID	19370					
Comment Code						
Inspector Comment						
FS_ID:52536 DS_ID:19370 EP_NO: 9320 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: 09/27/2017 Received updated information from DWR levee inspector, Zachary Jojola, confirming that this crossing is still abandoned. Recommend pipe be abandoned properly according to Title 23 requirements. Updated photos have been added to this report. (DWR UCIP - O. Magana)04/09/2013 Appears abandoned as pump is missing from platform. (DWR UCIP - W. Wylie) FIELD_STRUCT_DESC: 16-inch steel irrigation pipe through the levee, 2.8 feet below the crown. Pipe discharges into a 36-inch concrete standpipe at the levee toe. Pump on steel pile structure in stream with metal walkway. Two service poles on the waterside (WS) slope. (Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 52+00) (15-inch pipe listed)]. FS Date: 11/29/2017 12:46:36 PM						

Photo 3 of 3 : UCIP_FA_2018_52536_77500.jpg



WS view: pipe and electrical panel visible.

LM Start	1.34	Rating **	M	Issue No.	22
LM End	1.54	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.737214 °	38.739591 °
				-121.683159 °	-121.685327 °
DWR ID	DWR_NA0008_02_f_2016_22				
Comment Code					
DT : Ditch					
Inspector Comment					
Ditch within 10 feef from levee toe on LS.					

Photo 1 of 1 : FA_2018_NA0008_257_22_20180904_00006.jpg



View of a ditch near landside toe. Fall 2016.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	1.89	Rating **	A/W	Issue No.	24
LM End	1.89	Issue Type +	Ma	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP LMA Responsibility		38.743768 °	38.743768 °	
			-121.689185 °	-121.689185 °	
DWR ID	19371				

Comment Code

Inspector Comment

FS_ID:52538
DS_ID:19371
EP_NO: 9320
Repair Type: No Action Needed
Crossing Status: Found
UCIP Comments: 09/27/2017 see dsid 25471 for details on new pipe installed. (DWR UCIP - O. Magana)09/01/2016 Pipe has been removed and replaced during the Knights Landing 2015 Levee Repair Project. (T. Hatch/UCIP) 04/08/2013 Pipe at flap gate rusted through at WS toe. Flap gate does not function properly. (W. Wylie/UCIP)
FIELD_STRUCT_DESC: *REMOVED* 1 of 2: 12-inch steel drainage pipe through the levee, 4 feet below the crown. Flap gate on the waterside (WS). Pipe is resting on a concrete headwall associated with another pipe. Siphon breaker in a 2-inch corrugated metal pipe (CMP) riser on the landside (LS) shoulder. Vertical pump unit on a concrete foundation in the irrigation ditch at the LS toe. (12-inch pipe [HLM 1.90] authorized under Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 103+21.8)].
FS Date: 9/16/2016 1:33:00 PM

LM Start	1.89	Rating **	A/W	Issue No.	24 (cont)
LM End	1.89	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP_FA_2018_52538_18706.jpg



12-inch pipe at concrete headwall on WS toe.

Photo 2 of 3 : UCIP_FA_2018_52538_18705.jpg



Pipe rusted through at flap gate on WS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	1.89	Rating **	A/W	Issue No.	24 (cont)
LM End	1.89	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.743768 °	38.743768 °
				-121.689185 °	-121.689185 °
DWR ID	19371				

Comment Code

Inspector Comment

FS_ID:52538

DS_ID:19371

EP_NO: 9320

Repair Type: No Action Needed

Crossing Status: Found

UCIP Comments: 09/27/2017 see dsid 25471 for details on new pipe installed. (DWR UCIP - O. Magana)09/01/2016 Pipe has been removed and replaced during the Knights Landing 2015 Levee Repair Project. (T. Hatch/UCIP) 04/08/2013 Pipe at flap gate rusted through at WS toe. Flap gate does not function properly. (W. Wylie/UCIP) FIELD_STRUCT_DESC: *REMOVED* 1 of 2: 12-inch steel drainage pipe through the levee, 4 feet below the crown. Flap gate on the waterside (WS). Pipe is resting on a concrete headwall associated with another pipe. Siphon breaker in a 2-inch corrugated metal pipe (CMP) riser on the landside (LS) shoulder. Vertical pump unit on a concrete foundation in the irrigation ditch at the LS toe. (12-inch pipe [HLM 1.90] authorized under Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 103+21.8)].

FS Date: 9/16/2016 1:33:00 PM

Photo 3 of 3 : UCIP_FA_2018_52538_18704.jpg



Pumphouse on concrete platform on LS toe with JP.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	1.90	Rating **	A/W	Issue No.	25
LM End	1.90	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.743775 °	38.743775 °
				-121.689190 °	-121.689190 °
DWR ID	19399				
Comment Code					
Inspector Comment					
FS_ID:11305 DS_ID:19399 EP_NO: 9320 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel drainage pipe through the levee, 21 feet below the crown. Slide gate on the waterside (WS) end. Open on the landside (LS) end. LS toe cobble revetted. Service pole on the LS slope. (24-inch pipe [HLM 1.9] authorized under Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 103+21.8)]. FS Date: 4/9/2013					

LM Start	1.90	Rating **	A/W	Issue No.	25 (cont)
LM End	1.90	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP_FA_2018_11305_18703.jpg



Pipe inlet located beneath pumphouse on LS toe.

Photo 2 of 3 : UCIP_FA_2018_11305_18702.jpg



Slide gate at headwall on WS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	1.90	Rating **	A/W	Issue No.	25 (cont)
LM End	1.90	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.743775 °	38.743775 °
				-121.689190 °	-121.689190 °
DWR ID	19399				
Comment Code					
Inspector Comment					
FS_ID:11305 DS_ID:19399 EP_NO: 9320 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel drainage pipe through the levee, 21 feet below the crown. Slide gate on the waterside (WS) end. Open on the landside (LS) end. LS toe cobble revetted. Service pole on the LS slope. (24-inch pipe [HLM 1.9] authorized under Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 103+21.8)]. FS Date: 4/9/2013					

Photo 3 of 3 : UCIP_FA_2018_11305_18701.jpg



Slide gate at headwall on WS toe.

LM Start	2.26	Rating **	M	Issue No.	26
LM End	2.26	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.748282 °	38.748282 °
				-121.692652 °	-121.692652 °
DWR ID	19388				
Comment Code					
Inspector Comment					
FS_ID:11304 DS_ID:19388 EP_NO: 15517 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: Pipe alignment should be marked at levee crossing. FIELD_STRUCT_DESC: 8-inch steel natural gas pipeline through the levee, 50 feet below the crown. (Permit No. 15517, 1991 - Chevron U.S.A., Inc.). Design drawings available in permit. FS Date: 4/9/2013					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.28	Rating **	M	Issue No.	27
LM End	2.28	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.748505 °	38.748505 °
				-121.692697 °	-121.692697 °
DWR ID	19386				
Comment Code					
Inspector Comment					
FS_ID:53017 DS_ID:19386 EP_NO: 13164 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 09/16/2018 Crossing marker on levee Unit 02 is missing. Having a marker on County Road 16 shoulder is not enough to find exact crossing location on levee. Crossing has been downgraded to "Non-Urgent" due to reclassification of gas lines. (O.Yakimov - DWR)09/01/2016 - Markers present on the edges of Road 16. Alignment indicated by markers shows parallel alignment to the levee. Permit indicates pipe crosses levee and therefore should have markers indicating where it crosses the levee. (T. Hatch/UCIP)04/08/2013 - Need to have pipe located and marked properly if still in use. (W. Wylie/UCIP) FIELD_STRUCT_DESC: 4-inch steel natural gas collection pipe through the levee, 3.2 feet below the crown. Permit indicates that the pipe was installed on the northern shoulder of Road 16 and crosses the Knights Landing Ridge Cut on the northern side of the Road 16 bridge. (Permit No. 13164, 1981 - Shell Oil Company). FS Date: 10/16/2018 3:42:38 PM					

LM Start	2.28	Rating **	M	Issue No.	27 (cont)
LM End	2.28	Issue Type +	En	Location *	

Photo 1 of 3 : UCIP_FA_2018_53017_18700.jpg



Sign on LS shoulder may indicate location of pipe, or it may indicate where pipe crosses approach ramp to bridge.

Photo 2 of 3 : UCIP_FA_2018_53017_75964.jpg



View from the levee crown looking toward the LS of the levee. gas line marker signs are visible marking an alignment parallel to the levee.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.28	Rating **	M	Issue No.	27 (cont)	
LM End	2.28	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.748505 °	38.748505 °	
				-121.692697 °	-121.692697 °	
DWR ID	19386					
Comment Code						
Inspector Comment						
FS_ID:53017 DS_ID:19386 EP_NO: 13164 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 09/16/2018 Crossing marker on levee Unit 02 is missing. Having a marker on County Road 16 shoulder is not enough to find exact crossing location on levee. Crossing has been downgraded to "Non-Urgent" due to reclassification of gas lines. (O.Yakimov - DWR)09/01/2016 - Markers present on the edges of Road 16. Alignment indicated by markers shows parallel alignment to the levee. Permit indicates pipe crosses levee and therefore should have markers indicating where it crosses the levee. (T. Hatch/UCIP)04/08/2013 - Need to have pipe located and marked properly if still in use. (W. Wylie/UCIP) FIELD_STRUCT_DESC: 4-inch steel natural gas collection pipe through the levee, 3.2 feet below the crown. Permit indicates that the pipe was installed on the northern shoulder of Road 16 and crosses the Knights Landing Ridge Cut on the northern side of the Road 16 bridge. (Permit No. 13164, 1981 - Shell Oil Company). FS Date: 10/16/2018 3:42:38 PM						

Photo 3 of 3 : UCIP_FA_2018_53017_75965.jpg



View of the marker signs information

LM Start	2.72	Rating **	A/W	Issue No.	8
LM End	2.93	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.754899 °	38.757925 °
				-121.692653 °	-121.693048 °
DWR ID	DWR_NA0008_02_f_2018_8				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.0 L					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistol-butted trees at the levee toe indicate slow retreat. 2011 - Multiple scallops throughout the site and slumping of the toe.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	2.98	Rating **	M	Issue No.	9
LM End	3.11	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.758587 °	38.760053 °
				-121.693359 °	-121.694686 °
DWR ID	DWR_NA0008_02_f_2018_9				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.1 L					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistol-butted trees at the levee toe indicate slow retreat. 2011 - Slumping of the levee toe.					

Photo 1 of 2 : FA_2018_NA0008_257_9_20181012_00025.jpg



View of the erosion on the waterside slope. Fall 2018.

LM Start	2.98	Rating **	M	Issue No.	9 (cont)
LM End	3.11	Issue Type +	Ma	Location *	WS

Photo 2 of 2 : FA_2018_NA0008_257_9_20181012_00024.jpg



View of the opening within the center channel. Fall 2018.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	3.31	Rating **	A/W	Issue No.	14
LM End	3.31	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.762301°	38.762301°
				-121.697190°	-121.697190°
DWR ID	DWR_NA0008_02_f_2018_14				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
The primary channel changes course throughout the water year and erodes the slope through an opening in the center barrier. The slope appears to be stable and erosion is not within the prism. The levee is further reinforced by the newly constructed berm on the land side. Recommend monitoring.					

Photo 1 of 2 : FA_2018_NA0008_257_14_20181012_00022.jpg



View of erosion on the waterside slope. Fall 2018.

LM Start	3.31	Rating **	A/W	Issue No.	14 (cont)
LM End	3.31	Issue Type +	Ma	Location *	WS

Photo 2 of 2 : FA_2018_NA0008_257_14_20181012_00023.jpg



View of the opening within the mail channel, facing upstream. Fall 2018.

LM Start	3.60	Rating **	A/W	Issue No.	10
LM End	3.73	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.765522 °	38.767336 °
				-121.700608 °	-121.701023 °
DWR ID	DWR_NA0008_02_f_2018_10				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.7 L					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2011 - The toe has eroded away and there are a few scallops from bank slumping.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
--	--	---	--	---	--

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	3.93	Rating **	A/W	Issue No.	28
LM End	3.93	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility		38.770317 °	38.770317 °	
			-121.701281 °	-121.701281 °	
DWR ID	19374				
Comment Code					
Inspector Comment					
FS_ID:11293 DS_ID:19374 EP_NO: 9317 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 1 of 2: 16-inch steel discharge pipe through the levee, 3 feet below the crown. Pump house on pile structure in drainage ditch on the landside (LS). Siphon breaker on the pipe on the waterside (WS). Service pole at the pump house. (16-inch pipe [HLM 3.97] authorized under Automatic Board Order (ABO) issued as Permit No. 9317, 1974 - Reclamation District No. 819). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 211+05) (15-inch pipe listed)]. FS Date: 4/9/2013					

LM Start	3.93	Rating **	A/W	Issue No.	28 (cont)
LM End	3.93	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP_FA_2018_11293_18675.jpg



Pump on LS toe.

Photo 2 of 3 : UCIP_FA_2018_11293_18674.jpg



Pump and pipes on LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	3.93	Rating **	A/W	Issue No.	28 (cont)	
LM End	3.93	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP LMA Responsibility			38.770317 °		38.770317 °
				-121.701281 °		-121.701281 °
DWR ID	19374					
Comment Code						
Inspector Comment						
FS_ID:11293 DS_ID:19374 EP_NO: 9317 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 1 of 2: 16-inch steel discharge pipe through the levee, 3 feet below the crown. Pump house on pile structure in drainage ditch on the landside (LS). Siphon breaker on the pipe on the waterside (WS). Service pole at the pump house. (16-inch pipe [HLM 3.97] authorized under Automatic Board Order (ABO) issued as Permit No. 9317, 1974 - Reclamation District No. 819). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 211+05) (15-inch pipe listed)]. FS Date: 4/9/2013						

Photo 3 of 3 : UCIP_FA_2018_11293_18673.jpg



16-inch pipe with siphon breaker on WS shoulder.

LM Start	3.94	Rating **	A/W	Issue No.	29
LM End	3.94	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.770335 °	38.770335 °
				-121.701286 °	-121.701286 °
DWR ID	19401				
Comment Code					
Inspector Comment					
FS_ID:11291 DS_ID:19401 EP_NO: 9317 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel discharge pipe through the levee, 9 feet below the crown. Pump house on pile structure in drainage ditch on the landside (LS). Siphon breaker on the pipe on the waterside (WS) with a butterfly shutoff valve. Service pole at the pump house. (Permit No. 9317, 1974 - Reclamation District No. 819). Pipe replaced in 2012. [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 210+99)]. FS Date: 4/9/2013					

Photo 1 of 3 : UCIP_FA_2018_11291_18669.jpg



Pumphouse at LS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	3.94	Rating **	A/W	Issue No.	29 (cont)	
LM End	3.94	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.770335 °	38.770335 °	
				-121.701286 °	-121.701286 °	
DWR ID	19401					
Comment Code						
Inspector Comment						
FS_ID:11291 DS_ID:19401 EP_NO: 9317 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel discharge pipe through the levee, 9 feet below the crown. Pump house on pile structure in drainage ditch on the landside (LS). Siphon breaker on the pipe on the waterside (WS) with a butterfly shutoff valve. Service pole at the pump house. (Permit No. 9317, 1974 - Reclamation District No. 819). Pipe replaced in 2012. [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 210+99)]. FS Date: 4/9/2013						

LM Start	3.94	Rating **	A/W	Issue No.	29 (cont)
LM End	3.94	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP_FA_2018_11291_18668.jpg



Pipe in grass on WS shoulder.

Photo 3 of 3 : UCIP_FA_2018_11291_18667.jpg



Siphon breaker and butterfly valve on WS shoulder.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	4.30	Rating **	A/W	Issue No.	11
LM End	4.55	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.775271 °	38.778115 °
				-121.703685 °	-121.706195 °
DWR ID	DWR_NA0008_02_f_2018_11				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 4.7 L					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2011 - This site is the downstream section of the old KLR					
5.3L site. Levee toe is slowly retreating. Cracking on top of the levee					
may indicate potential mass movement.					

No Photos

LM Start	4.53	Rating **	C	Issue No.	15
LM End	4.56	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.778120 °	38.778437 °
				-121.705754 °	-121.706050 °
DWR ID	DWR_NA0008_02_s_2018_15				
Comment Code					
CR1 : Monitor and have inspected by geotechnical engineer.					
Inspector Comment					
150' long and 1" wide crack that has swelled up from the rain. RD 108 has the crack flagged and continues to monitor.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	5.36	Rating **	A/W	Issue No.	12
LM End	5.93	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.786566 °	38.792395 °
				-121.716724 °	-121.724091 °
DWR ID	DWR_NA0008_02_f_2018_12				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 5.8 L					
Status: Eroding					
2017 Field Notes: Hummocky levee, with multiple slump failures and tree popouts.					
Site History: 2011 - This site is the upstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement.					

No Photos

LM Start	5.55	Rating **	M	Issue No.	30
LM End	5.55	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.788662 °	38.788662 °
				-121.718997 °	-121.718997 °
DWR ID	19375				
Comment Code					
Inspector Comment					
FS_ID:11289 DS_ID:19375 EP_NO: 3671 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Electrical panal missing parts. Siphon breaker missing from pipe on LS. Pipe heavily corroded at outlet with holes present. Appears abandoned-should be abandoned properly. FIELD_STRUCT_DESC: 20-inch coated steel irrigation pipe through the levee, 5.5 feet below the crown. Siphon breaker in a steel pipe riser on the landside (LS) slope. Metal cutoff wall. Service pole on the waterside (WS) slope. (Replaced 20-inch pipe at same location in 1961 under Permit No. 3671, 1961 - Mary Anna Richardson). [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/9/2013					

Photo 1 of 3 : UCIP_FA_2018_11289_18665.jpg



Pump on pile structure on WS toe.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	--	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	5.55	Rating **	M	Issue No.	30 (cont)	
LM End	5.55	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.788662 °	38.788662 °	
				-121.718997 °	-121.718997 °	
DWR ID	19375					
Comment Code						
Inspector Comment						
FS_ID:11289 DS_ID:19375 EP_NO: 3671 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Electrical panal missing parts. Siphon breaker missing from pipe on LS. Pipe heavily corroded at outlet with holes present. Appears abandoned-should be abandoned properly. FIELD_STRUCT_DESC: 20-inch coated steel irrigation pipe through the levee, 5.5 feet below the crown. Siphon breaker in a steel pipe riser on the landside (LS) slope. Metal cutoff wall. Service pole on the waterside (WS) slope. (Replaced 20-inch pipe at same location in 1961 under Permit No. 3671, 1961 - Mary Anna Richardson). [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/9/2013						

Photo 2 of 3 : UCIP_FA_2018_11289_18664.jpg



Missing siphon breaker on LS slope.

LM Start	5.55	Rating **	M	Issue No.	30 (cont)
LM End	5.55	Issue Type +	En	Location *	

Photo 3 of 3 : UCIP_FA_2018_11289_18663.jpg



Concrete headwall and distribution box at outlet on LS toe. Pipe heavily corroded.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	5.71	Rating **	A/W	Issue No.	13
LM End	5.71	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Animal Control			38.790352°	38.790352°
				-121.721124°	-121.721124°
DWR ID	DWR_NA0008_02_f_2018_13				
Comment Code					
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.					
Inspector Comment					
Rodent holes on the landside slope.					

No Photos

LM Start	5.79	Rating **	C	Issue No.	18
LM End	5.79	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.791169 °	38.791169 °
				-121.722147 °	-121.722147 °
DWR ID	DWR_NA0008_02_f_2015_18				
Comment Code					
DT : Ditch					
Inspector Comment					
Ditch dug on the landside slope of the levee to prevent vehicle access.					

No Photos

LM Start	5.94	Rating **	M	Issue No.	1
LM End	5.94	Issue Type +	En	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.792735 °	38.792735 °
				-121.724092 °	-121.724092 °
DWR ID	DWR_NA0008_02_s_2012_1				
Comment Code					
FE : Fence					
Inspector Comment					
Fence blocks access to NW part of the levee. Strawberries are being grown on the waterside slope and beehives are on the crown.					

Photo 1 of 2 : FA_2018_NA0008_257_1_20180904_00001.jpg



View of the fence on the crown. Fall 2017.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/12/2018 10/12/2018	Zach Jojola

LM Start	5.94	Rating **	M	Issue No.	1 (cont)	
LM End	5.94	Issue Type +	En	Location *	CR	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start	End	
Item	Encroachments			38.792735 °	38.792735 °	
				-121.724092 °	-121.724092 °	
DWR ID	DWR_NA0008_02_s_2012_1					
Comment Code						
FE : Fence						
Inspector Comment						
Fence blocks access to NW part of the levee. Strawberries are being grown on the waterside slope and beehives are on the crown.						

Photo 2 of 2 : FA_2018_NA0008_257_1_20180904_00002.jpg



View of the fence on the crown of the levee looking upstream. Spring 2016.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
--	--	---	---